

On page 181, line 21, please delete "Taq" and replace with --*Taq*--.

On page 182, line 1, please delete "enzyme Cleavase™ BN and Taq" and insert --
Cleavase™ BN enzyme and *Taq*--.

On page 182, lines 5, 24 and 25-26, please delete "enzyme Cleavase™ BN" and insert
--Cleavase™ BN enzyme--.

On page 185, line 25, please delete "enzyme Cleavase™ BN" and insert --Cleavase™
BN enzyme--.

On page 187, lines 8-9, please delete "enzyme Cleavase™ BN" and insert --Cleavase™
BN enzyme--.

On page 189, line 16, after "BN", please insert --enzyme--.

On page 200, lines 6 and 10, after "BN", please insert --enzyme--.

On page 267, line 17, please delete "M. tuberculosis" and insert --*M. tuberculosis*--.

On page 303, line 16, please delete "H2O" and insert --H₂O--.

IN THE CLAIMS:

Please cancel Claims 2 and 30 without prejudice as to their renewal.

Please amend the following claims:

1. (Amended) A method [for identifying strains of microorganisms], comprising:
- a) providing:
- i) [a] an enzymatic cleavage means; [and]
- ii) a nucleic acid substrate containing sequences derived from one
or more microorganism; and
- iii) control cleavage products produced by cleavage of a reference
sequence derived from a microorganism;
- b) treating said nucleic acid substrate under conditions such that said
substrate forms one or more cleavage structures; [and]
- c) reacting said cleavage means with said cleavage structures so that one or
more test cleavage products are produced[.] ; and
- d) comparing said test cleavage products to said control cleavage products.

36. (Amended) The method of Claim[2] 1, wherein said [enzyme] enzymatic cleavage means is a nuclease.

Q7C 37. (Amended) The method of Claim 3, wherein said nuclease is selected from the group consisting of ~~Cleavase~~⁴™ BN nuclease, *Thermus aquaticus* DNA polymerase, *Thermus thermophilus* DNA polymerase, *Escherichia coli* Exo III, and the *Saccharomyces cerevisiae* Rad1/Rad10 complex.

Sub. 4B4 19. (Amended) A method for treating nucleic acid [detecting and identifying strains of microorganisms], comprising:

- Q8
- a) extracting nucleic acid from a sample suspected of containing one or more microorganisms; and
 - b) contacting said ~~extracted~~ nucleic acid with [a] an enzymatic cleavage means under conditions such that said extracted nucleic acid forms one or more secondary structures, and said cleavage means cleaves said secondary structures to produce [one or more] a plurality of cleavage products.

32. 32. (Amended) The method of Claim [30] 18, wherein said [enzyme] enzymatic cleavage means is a nuclease.

Q9 32. 32. (Amended) The method of Claim 31, wherein said nuclease is selected from the group consisting of ~~Cleavase~~³²™ BN nuclease, *Thermus aquaticus* DNA polymerase, *Thermus thermophilus* DNA polymerase, *Escherichia coli* Exo III, and the *Saccharomyces cerevisiae* Rad1/Rad10 complex.

Sub. 4B5 44. (Amended) A method [for treating nucleic acid comprising an oligonucleotide containing microbial gene sequences], comprising:

- Q10
- a) providing:
 - i) [a] an enzymatic cleavage means in a solution [containing] comprising manganese; and
 - ii) nucleic acid substrate containing microbial gene sequences;

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or

- Q 109
CMT
- b) treating said nucleic acid substrate with increased temperature such that said substrate is substantially single-stranded;
 - c) reducing said temperature under conditions such that said single-stranded substrate forms one or more cleavage structures;
 - d) reacting said cleavage means with said cleavage structures so that one or more cleavage products are produced; and
 - e) detecting said one or more cleavage products.

Please add the following new claims.

44 45. The method of Claim 44, wherein said enzymatic cleavage means is a nuclease.

C 45.
46. The method of Claim 45, wherein said nuclease is selected from the group consisting of Cleavase™ BN enzyme, *Thermus aquaticus* DNA polymerase, *Thermus thermophilus* DNA polymerase, *Escherichia coli* Exo III, and the *Saccharomyces cerevisiae* Rad1/Rad10 complex.

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46.
47. The method of Claim 46, wherein said nucleic acid substrate comprises a nucleotide analog.

C 47.
48. The method of Claim 47, wherein said nucleotide analog is selected from the group consisting of 7-deaza-dATP, 7-deaza-dGTP and dUTP.

C 48.
49. The method of Claim 48, wherein said nucleic acid substrate is selected from the group consisting of RNA, double stranded DNA and single stranded DNA.

Sub C4
49.
50. The method of Claim 49, wherein said bacteria are selected from the group consisting of members of the genera *Campylobacter*, *Escherichia*, *Mycobacterium*, *Salmonella*, *Shigella* and *Staphylococcus*.